

REMARKS/ARGUMENTS

This case has been carefully reviewed and analyzed in view of the Official Action dated 7 September 2006. Responsive to the rejections made in the Official Action, Claims 1-16 and 22-26 have been amended to clarify the combination of elements which form the invention of the subject Patent Application. Additionally, Claims 17-21 have been canceled by this Amendment.

In the Official Action, the Examiner rejected Claims 1, 2, 4, 5, 7-9, 12-17 and 23-26 under 35 U.S.C. § 102(b), as being anticipated by Shaver, et al., U.S. Patent 4,964,075. The Examiner rejected Claims 3, 6 and 22 under 35 U.S.C. § 103(a), as being unpatentable over Shaver, et al., in view of Kuehneman, et al., U.S. Patent 4,688,020. Claims 10, 11 and 18-21 were rejected under 35 U.S.C. § 103(a), as being unpatentable over Shaver, et al., in view of Criscione, U.S. Patent Application Publication 2004/0041792.

Before discussing the prior art relied upon by the Examiner, it is believed beneficial to first briefly review the structure of the invention of the subject Patent Application, as now claimed. The invention of the subject Patent Application is directed to a keyboard having a user programmable input apparatus. The keyboard includes a plurality of keys disposed thereon for input operations. The keyboard includes a microprocessor coupled to the plurality of keys for receiving an input therefrom. Further, the keyboard includes a non-volatile memory coupled to the microprocessor and programmable by operating the plurality of keys. Still further,

the keyboard includes a transmission arrangement coupled to the microprocessor for outputting data external to the keyboard. The plurality of keys includes a set of special control keys programmable to simulate a cursor control device. The set of special control keys is programmable to have a different report rate from that of the other of the plurality of keys to coincide with the requirements of a cursor control device.

In contradistinction, the Shaver, et al. reference is directed to a software and hardware independent auxiliary user programmable intelligent keyboard. The device is an add-on accessory that is coupled between a conventional keyboard 11 and a computer system 15. Nowhere does the reference disclose or suggest a keyboard having a user programmable apparatus incorporated therein, as now claimed. The reference clearly teaches away from that structure. The user programmable entry device 19 includes a plurality of MACRO keys 25, a Shift key 24 and a programming time delay key 36. A plurality of keys are coupled to a microprocessor 30 through a keyboard decoder 33. The microprocessor 30 is coupled to memory in the form of ROM 31 and RAM 32. The microprocessor 30 is also coupled to communication interfaces 29 and 44. While the keys 25 are programmable with key sequences being stored in memory, nowhere does the reference disclose or suggest any of the keys 25 are programmable to simulate a cursor control device, as claimed. And while time delays may be inserted between the output of each character code, as the means of slowing the transmission rate of

characters, such is neither a different report rate, the rate at which a character code is repeated when a keyboard key is held in an on state, and is clearly not programmable to have a different report rate from that of the other of the plurality of keys to coincide with requirements of a cursor control device, as now claimed.

A cursor control device requires a higher report rate than a conventional character key, in order to update the cursor position as the cursor control device is operated. Thus, the reference, rather than increasing a frequency of the trigger signals associated with the switch, as required when simulating a cursor control, the reference teaches away from that structure in providing for increased delays between character codes (assuming that output of character codes stored in memory is equivalent to output of trigger signals from a switch closure, as the Examiner has interpreted the reference).

Therefore, as Shaver, et al. fails to disclose each and every one of the elements of the invention of the subject Patent Application, as now claimed, it cannot anticipate that invention. Further, as the reference fails to suggest such a combination of elements, and in fact teaches away from that combination, it cannot make obvious that invention either.

The Kuehneman, et al. reference does not overcome the deficiencies of Shaver, et al. The Kuehneman, et al. reference is directed to a reconfigurable keyboard wherein selected ones of a plurality of key switches are connected to covers for operating those particular key switches, wherein others of the key

switches are left inoperable. The device includes a plurality of key tables, any one of which may be selected to control the output of the keyboard and define the functions of each of the operable keys which have been coupled to key covers. However, nowhere does the reference disclose or suggest the inclusion of a set of special control keys that are programmable to simulate a cursor control device, the set of special control keys being programmable to have a different report rate from that of the other of the plurality of keys to coincide with requirements of a cursor control device, as now claimed.

Therefore, as neither Shaver, et al., nor Kuehneman, et al. disclose or suggest the concatenation of elements which forms the invention of the subject Patent Application, their combination cannot make obvious that invention.

The Criscione reference does not overcome the deficiencies of Shaver, et al. The Criscione reference is directed to a keyboard input device which is operated by a single hand. The keyboard 101 includes a key area 203 with a plurality of keys thereon. The device includes a motion detector 102 to provide cursor control input when the user manipulates the keypad 101, or a first portion 209 of the device relative to a base 202 thereof. Thus, the device includes a motion sensor similar to that of any conventional mouse, whereby the keyboard device is physically displaced in order to provide cursor control. Thus, nowhere does the reference disclose or suggest any special control keys that are programmable to simulate a cursor control device, the set of special control keys being

programmable to have a different rate from that of the other of the plurality of keys to coincide with requirements of a cursor control device, as now claimed. In fact, the reference teaches away from such a structure, in that rather than providing any special control keys for cursor control, the reference discloses the inclusion of a motion sensor which is used to sense the physical displacement of the entire keypad, or a portion 209 relative to a base 202 (paragraph 56).

Therefore, as neither Shaver, et al. nor Criscione disclose the concatenation of elements which form the invention of the subject Patent Application, and in fact teach away from that combination, they cannot make obvious that invention.

For all of the foregoing reasons, it is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

No fees are believed to be due with this Amendment. If there are any charges associated with this filing, the Honorable Commissioner for Patents is hereby authorized to charge Deposit Account #18-2011 for such charges.

Respectfully submitted,
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7 December 2006

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